**Listing of Claims:**

1. (Currently Amended) An electromagnetic actuator comprising a first magnetic assembly (12), a second magnetic assembly (11), the polarity of one of said assemblies being changeable in response to an electrical control signal in order to cause relative movement between the first and second assemblies along an axis of relative movement, one of the assemblies (12) being provided with a fin (14) projecting transversely to said axis of relative movement and the other of the assemblies being provided with a slot (15) extending parallel to the axis of relative movement and arranged to receive the fin (14), characterized in that the said other assembly comprises a plurality of magnetic elements in order to create axially alternating magnetic fields.

2. (Currently Amended) An actuator according to claim 1, wherein second assembly (11) is in the form of a cylinder arranged to house the first assembly (12).

3. (Currently Amended) An actuator according to claim 2, wherein the second assembly (11) comprises a plurality of permanent magnetic sections each having pole pieces (24b).

4. (Original) An actuator according to claim 3, wherein the pole pieces (24b) taper towards the outer periphery of the assembly.

5. (Previously Amended) An actuator according to claim 2, wherein the ends of the cylinder are sealed and the slot 15 is provided with a sliding seal (16) in order to provide clamping for the movement of the first assembly in the second assembly.

6. (Currently Amended) An actuator according to claim 2, wherein the said other assembly comprises a plurality of coils ~~would~~ wound in order to create a channel to receive the fin of the first assembly.

7. (Original) An actuator according to claim 6, wherein the coils are wound in pairs in a figure of eight.

8. (Added) An actuator according to claim 6, wherein said plurality of coils are wound to create a gap (15a) in the coils to permit the fin of the first assembly to be received by the other assembly.

9. (Added) An actuator according to claim 1 wherein the other assembly is lined with a hard, slotted dielectric tube.

10. (Added) An actuator according to claim 9 wherein the first assembly is provided with a bearing surface which is arranged to slide along the hard dielectric tube.